

THE

October, 1957

CHEMIST

VOLUME XXXIV



NUMBER 10



Dr. C. F. Rassweiler, F.A.I.C.
Receives Honor Scroll of N. Y. Chapter

(See Page 375)

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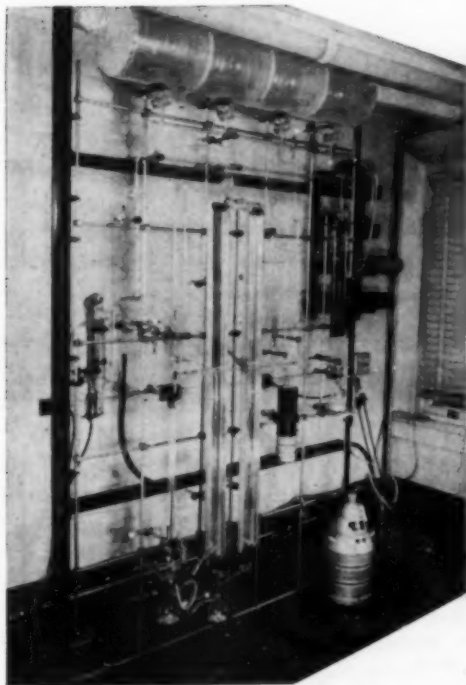
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Deadlines for The Chemist

Copy for the December issue of The Chemist should be in our hands before November 10th. Advertising copy for December should be received not later than November 15th.

THE AMERICAN INSTITUTE OF CHEMISTS does not necessarily endorse any of the facts or opinions advanced in articles which appear in THE CHEMIST.

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TO COME IN NOVEMBER

Dr. Maurice J. Kelley, F.A.I.C., has provided us with a scholarly series on "Understanding the Creative Process", to begin this month. It summarizes and evaluates much of the published material in this field. We also look forward to good reading about "The Captive Professional Chemist", which is the title of the acceptance address to be given by Dr. H. S. Bloch, F.A.I.C., when he receives the Honor Scroll of the Chicago Chapter on October 10th.

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EDITORIAL

The Chemist as a Professional

AN excellent definition of the professional chemist is given in the August 1955, *CHEMIST* (p. 293) and in the October, 1956 *CHEMIST* (p. 400), by Dr. Ray P. Dinsmore:

A professional person is an individual, who, with adequate training, experience, intellectual capacity, and moral integrity, effectively devotes his skills and knowledge to the service of society and his profession in whatever assignment he finds himself, being fully sensible of the personal responsibility and trusteeship conferred by his special training.

The attitude which the professional chemist should have is concisely expressed in a report by the Engineers Joint Council, in the May, 1956, issue of *Chemical Engineering Progress*:

What is the Professional Attitude

A social consciousness, a desire to contribute to rather than simply to benefit from civilization; a resolve to place the public welfare above other considerations.

The acquisition of special skills on a high intellectual plane, generally evaluated by means of self-imposed standards of excellence.

A sense of trusteeship—personal responsibility to protect the client's or employer's interest.

Individual initiative and acceptance of individual responsibility, both of the highest order.

A right to expect and to receive adequate financial recognition.

The rules, in detail, of professional conduct and ethics are well-stated in the "Code of Ethics" which each member of THE AMERICAN INSTITUTE OF CHEMISTS agrees to follow, when elected to membership.

But the professional chemist, having achieved the recognition of his colleagues, deserves and desires public recognition of his status. Dr. Clifford F. Rassweiler, F.A.I.C., in this issue of THE CHEMIST, explores this wish and offers a practical program, in which each AIC member can take a part, to acquaint society at large with the great services rendered by chemists and which entitle chemists to public recognition. Such a course of action can have only beneficial results.

Special AIC Announcements

Chicago Honor Scroll to Dr. Bloch

Dr. Herman S. Bloch, F.A.I.C., of Universal Oil Products Co., Riverside, Ill., will receive the Honor Scroll of the Chicago AIC Chapter at a

dinner meeting on October 10, 1957, at the Furniture Club, Chicago, Ill. Speakers will be Herman E. Reis, Jr., and Hoylande D. Young. AIC President Hass will present the Scroll. Dr. Bloch's acceptance address is entitled, "The Captive Professional Chemist."

Pennsylvania Chapter to Honor Dr. Ulliyot

The Honor Scroll of the Pennsylvania Chapter will be presented to Dr. Glenn E. Ulliyot, F.A.I.C. of Smith, Kline and French, Philadelphia, Pa., at a meeting at the Penn Sherwood Hotel, Philadelphia, on January 9, 1958. Dr. Richard T. Arnold will present Dr. Ulliyot, who will speak on "The Development and Requirements of Creativity."

Niagara Chapter to Honor Taylor

The Honor Scroll of the Niagara AIC Chapter will be presented to Maurice C. Taylor, Consultant, Niagara Falls, N. Y., a charter member and organizer of the Chapter, at a meeting to be held October 29, 1957, at the Red Coach Inn, Niagara Falls, N. Y. M.R. Bhagwat, F.A.I.C., will introduce Mr. Taylor.

To AIC Chapter Chairmen

The chairman of each Chapter is a member of the Committee on Nominations, which submits nominations for officers and councilors-at-large for the annual elections. Soon, the Secretary will write asking for nominations for the following offices: President-elect, Secretary, Treasurer, and three Councilors-at-Large. Now is a good time to plan your list of nominees. (Only Fellows are eligible for these offices.)

To AIC Chapter Secretaries

Please send dates or tentative dates and programs of future meetings of your Chapter to THE CHEMIST for listing in the calendar of AIC meetings. Material should be received at least by the 15th of the month preceding the month in which a meeting will be held.

To All AIC Members

When traveling, if your schedule brings you into other Chapter areas at the time of meetings, you are cordially welcome to attend these meetings.

Will You Come

Oct. 1957. (Day to be Announced). Alabama Chapter. Dinner and Meeting. Speaker: Dr. Charles R. Scott, Professor of Industrial Management, University of Alabama. For information: Martin B. Williams, 402 Holmes St., Huntsville, Alabama.

Oct. 3, 1957. New York Chapter. Dinner (\$7.00) 6:30 p.m., and meeting, Baroque Room, Belmont Plaza Hotel, New York, N. Y. Discussion theme: "Management evaluates the Chemist." Speakers: Prof. Ernest Dale, Graduate School, Business Administration, Cornell Univ., "Appraisal of Chemists by Industry"; and Philip R. Kelly, Personnel Relations, American Cyanamid Co., "Reappraisal of Appraisals." Moderator, Dr. E. I. Becker.

Oct. 3, 1957. Pennsylvania Chapter, AIC Dinner meeting. 6:30 p.m. The Engineers' Club, 1317 Spruce St., Philadelphia, Pa. Speaker, Dr. R. Graeme Smith. Topic, "Horatio Alger Today or the Owner-Manager in the Big City Pattern."

WILL YOU COME . . .

- Oct. 8, 1957.** New Jersey Chapter. Dinner and Meeting. Military Park Hotel, Newark, N.J. Panel discussion, "The Value of Summer Employment of High School Science Teachers." Moderator, Clifford Ayers of Borne Chemical Co. Speakers: George Probst, director, Thomas Alva Edison Foundation; Louis Auerbach, chairman, Science Dept. of Newtown High School, Elmhurst, N.Y.; Dr. L. E. Moody, Research & Engineering Division, Esso Standard Oil Co. Question period. Reservations, including gratuities, for the dinner at 6:30 p.m. will be \$3.65. Secretary: Dr. J. F. Mahoney, Merck & Co., Inc., Rahway, N.J. (Telephone: FULTON 8-1200, Ext. 3254.)
- Oct. 10, 1957.** Chicago Chapter. Dinner and meeting. The Furniture Club, Chicago, Ill. Presentation of Honor Scroll to Dr. Herman S. Bloch, Universal Oil Products Co. Speakers: Dr. Herman E. Ries, Jr., Standard Oil Co. (Indiana); Dr. Hoylande Young, Argonne National Laboratories, and AIC President, Dr. Henry B. Hass. Reservations: (\$6.00), Helen Selin, 6916 No. Wayne Ave., Chicago 26, Ill.
- Oct. 11, 1957.** Twin Cities Chapter. Dinner Meeting, Criterion Restaurant, St. Paul, Minnesota. Cocktails 6:00 p.m., dinner 6:30 p.m., meeting 8:00 p.m. Speaker: Dr. Mark Graubard, University of Minnesota, "Origins and Development of Alchemy." Reservations: Morris Kenigsberg, The Toni Company, St. Paul, Minn.
- Oct. 15, 1957.** AIC Board of Directors and National Council meeting, The Chemists' Club, 52 E. 41st St., New York 17, N. Y. Board meets at 5:30 p.m., Council at 6:00 p.m.
- Oct. 29, 1957.** Niagara Chapter. Dinner meeting. Presentation of Honor Scroll to Maurice C. Taylor, Consultant, Niagara Falls, N. Y. M. R. Bhagwat, F.A.I.C., Hooker Electrochemical Co., will introduce Mr. Taylor. For details, Dr. M. H. Fleyscher, 67 Admiral Road, Buffalo 16, N. Y.
- Nov. 1957.** (Day to be announced.) Alabama Chapter. Dinner and Meeting. Speaker to be announced.
- Nov. 5, 1957.** (Tentative date). New Jersey Chapter. Meeting to be held in conjunction with Rutgers University Student Affiliate Chapter of The American Chemical Society. Subject: "How to Get a Satisfactory Job."
- Nov. 11, 1957.** New York Chapter. Details to be announced.
- Dec. 12, 1957.** New York Chapter. Details to be announced.
- Dec. 17, 1957.** AIC National Council and Board of Directors Meeting, The Chemists' Club, 52 E. 41st St., New York 17, N.Y. Board meets at 5:30 p.m.; Council at 6:00 p.m.
- Jan. 7, 1958.** New Jersey Chapter. Subject, "Employer-Employee Relationships." Details to be announced.
- Jan. 9, 1958.** Pennsylvania Chapter. Dinner and Meeting, Penn Sherwood Hotel, Philadelphia, Pa. Award of Honor Scroll to Dr. Glenn E. Ullyot, F.A.I.C., of Smith, Kline and French. Dr. Richard T. Arnold of Alfred P. Sloan Foundation, will introduce Dr. Ullyot, who will speak on "Development and Requirements of Creativity." For information, Dr. T. M. Immediata, International Resistance Co., 401 N. Broad St., Philadelphia 8, Pa.
- Feb. 7, 1958.** New York Chapter. Details to be announced.
- Feb. 18, 1958.** AIC Board of Directors and National Council Meeting, The Chemists' Club, 52 E. 41st St., New York 17, N. Y. Board meets at 5:30 p.m.; Council at 6:00 p.m.
- Mar. 11, 1958.** New Jersey Chapter. Visit to Anheuser-Busch Brewery. Details to be announced.
- April 3, 1958.** New York Chapter. Details to be announced.
- April 10-11, 1958.** Thirty-fifth Annual Meeting. THE AMERICAN INSTITUTE OF CHEMISTS. Ambassador Hotel, Los Angeles, California. Host: The Western Chapter.
- May 13, 1958.** New Jersey Chapter. Honor Scroll Meeting. Program to be announced.
- June 4, 1958.** New York Chapter. Details to be announced.



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What Kind of Professional Status Do Chemists Want?

Dr. Clifford F. Rassweiler, F.A.I.C.

*Vice Chairman of the Board, Johns-Manville Corporation, 22 East 40th St.,
New York, N. Y.*

(Address, here condensed, presented when the author received the Honor Scroll of the New York AIC Chapter, June 6, 1957, at New York, N. Y.)

FOR years I have followed sympathetically the efforts that chemists have been making to transfer some of the glamor the public attaches to the science of chemistry into an improved personal status for themselves as individuals. A disappointing aspect of the growing importance of chemistry to the welfare of this country is the extent to which the majority of chemists have not received the public recognition to which their accomplishments really entitle them.

One method of achieving greater individual recognition, popular with chemists, is that spoken of as achieving professional status. This is the line of approach in which THE AMERICAN INSTITUTE OF CHEMISTS has taken a foremost role. But there is difficulty in defining "professional status." The AIC has a list of objectives and a Code of Ethics, both of which list desirable things, but without providing a real definition of this elusive "professional status" which chemists crave.

Webster's dictionary defines the noun "professional" as:

"The occupation, if not purely commercial, mechanical, agricultural, or the like, to which one devotes one-

self; a calling in which one professes to have acquired some special knowledge used by way either of instructing, guiding, or advising others or of serving them in some art; as, the profession of arms, of teaching, of chemist. *The three professions, or learned professions, is a name often used for the professions of theology, law and medicine. Broadly, one's principal calling, vocation, or employment.*"

There are two significant points in this definition: One is the phrase, "a calling in which one professes to have acquired some special knowledge" and the emphasis placed on the three "learned professions." Both by definition and by generally accepted concept, a profession is a vocation which requires specialized and superior education.

The second significant point is the phrase "used by way either of instructing, guiding, or advising others or of serving them." By definition and general concept, a profession is a vocation which serves others.

The definition of "professional" as an adjective starts out nearly the same way as that of the term "profession." It is:

"1. Pertaining to a profession, especially a learned or skilled profession; as, *professional training or ethics*; a club limited to *professional men*.

"2. Characteristic of or conforming to the technical or ethical standards of a profession or an occupation regarded as such; as, *professional courtesy*."

The term "professional", as an adjective, however, has a third definition, quite different:

"Engaging for livelihood or gain in an activity pursued, usually or often, for non-commercial satisfactions by amateurs; as a *professional* golf player; a *professional* soldier."

Here the emphasis is on the fact that one who pursues this activity for pay is distinguished from others who may carry on the same activity purely for their personal satisfaction.

When we come to the definition of "professional" as a noun, only the last of the three definitions given for it as an adjective remains. Here, a professional is,

"One who engages in anything professionally; a professional worker—opposed to *amateur*. In sports, generally one who has competed in any sport for a stake or purse or for gate money."

A man is not a professional because of the nature of what he is doing, but simply because he does it well enough to be paid for doing it.

There are, therefore, two extremes of professional status and there are gradations sharing aspects of both extremes. At one end are the practitioners of the "learned professions." At the other end are the men who have developed, by practice and training, certain skills which make them more capable than others, and which they use to earn a living. The

first we speak of as "professional men"; the latter, as "professionals" or "Pros." Almost all of the gradations of professional status, from something corresponding to the status of the professional athlete to the professional status of the eminent jurist on the Supreme Court, exist within that large group who call themselves chemists.

Probably most chemists have not thought analytically about the differences between various types of professional status; have not defined what kind of professional status they would like to have; what kind it is practical for them to achieve, and what price they are willing to pay in time and effort to achieve the type of status they desire.

Let us examine the advantages and disadvantages of the two types of professional status and how they might apply to those who are entitled to call themselves chemists because they have graduated from a certified school. We may call one type of status that of the "Pro" and the other that of a "Professional Man." As typical professional men, we may think of the doctor or lawyer, since their professions have the status and reputation to which so many chemists aspire.

Being a "Pro" does not ordinarily carry with it the social standing and intellectual respect ordinarily accorded to a doctor or lawyer, but it often provides a highly satisfactory economic status with a minimum of ef-

fort. A Pro is one who, by practice, training, and repeated performance, has gained a high degree of skill at some specialized activity. This sets him aside from others who cannot match his accomplishment, and if the skill serves a useful purpose, he is likely to be well paid by the people who require his skill. One can become a Pro with a relatively minor expenditure for formal training or education. While the Pro may lose his skill if he does not practice it continuously, the work for which he is paid usually supplies the practice required to maintain and adjust his skill to improvements in his vocation. He needs to do little or no studying. This advantage of minimum education and training, however, also represents one of the major disadvantages of being a Pro, for his skills are usually quite narrow and applicable to rather specific purposes. His earning power is apt to advance rapidly initially, but to reach a plateau from which it goes up slowly with added age and it may actually fall off sharply.

Despite limitations, the Pro can be a valuable person and can have a great deal of pride in his status and accomplishments. The term Pro is often used as a high compliment. When we say a man is a real Pro, we mean he has used his natural abilities in a highly skilled way. . . .

A great many chemists are Pros. By repeated practice and experience, they have become highly skilled in

some particular operation of a chemical nature; but breadth of knowledge may have disappeared. Their limitations may be inadequate initial education, lack of personal ability, or an unwillingness to make the effort necessary to grow into fuller professional status. In the field of medicine, these people would be called technicians, but not doctors. In chemistry, however, they are called chemists, if they received a four-year degree in chemistry from an accredited school.

One of the great strengths of the chemical profession is its tremendous growth in many different directions without loss of its solidarity. That men of such different training or abilities, carrying on totally different occupations, are still drawn together by the common bond of being chemists is highly important; anything we do to fracture this solidarity should be done only after consideration of the consequences.

The majority of chemists, however, want to be more than just Pros; they strive for something more nearly approaching the status of a practitioner of one of the learned professions. What are the characteristics of this status? What can they or the scientific societies do to help them toward this objective?

The first difference between the Pro and the Professional lies in the term "learned profession." The more desirable types of professional status gain their stature because they demand

a degree of education greater than that required for pursuing other means of livelihood. As the professions of law and medicine have become more intricate, the educational requirements necessary to gain the distinction of being called a doctor or lawyer have been made continually higher. Four years of college training now only qualify one to start the professional training necessary for achieving the professional status these two titles confer. We are near the stage where a four-year college education is a mass production item. One can no longer stand apart in our civilization as an especially learned individual based on a B.S. degree in chemistry.

Should we try to achieve professional status by placing more emphasis on the professional status of the men with advanced graduate training? In the case of the lawyer and the doctor, this additional preparation confers a title and a distinction from other people which is retained throughout life. There are serious objections to making too great a separation in the field of chemistry between men with Doctor's degrees and those with Bachelor's degrees. The professional practice of law and medicine covers a narrow scope of activities for which initial training is essential. But the field of chemistry is extremely broad. It covers not only the carrying on of chemical reactions and processes, but a myriad of other activities. In this broad range of activity, after a period of years the initial training often be-

comes less important than natural ability and self-education. So an attempt to stratify professional status in the chemical field on the basis of initial education is neither desirable nor practical.

The status of chemists could be improved in terms of general respect and in financial matters, if the initial educational training and standards were gradually raised. There is question whether a man now taking a B.S. degree in chemistry from many accredited schools knows any more than those who took a similar degree from the same schools twenty years ago. Recognizing this, the engineers have pushed the requirements in many schools to five years of training. It might be well to move toward a fifth year of training for full qualification as a chemist. One year of plus training could be made of tremendous value to the chemist who is going into industry or teaching without a Ph.D.

Recently, the M.S. degree has fallen into considerable disrepute. The plus training it represents is not adequate to develop either professional skills or professional attitudes. It may often represent either a painless way to terminate the graduate study of one who is not judged of Ph.D. caliber, or be just another year of elaboration on the fact-gathering which represents most undergraduate education. The M.S. degree would have more usefulness, if it were a terminal degree with a specialized type of curriculum. For the chemist going into industry,

this extra year might involve study of industrial organization and the responsibilities assigned to technical men in such organizations; the laying-out of experimental programs to solve different problems, rather than how to carry on chemical reactions; the significance and presentation of data, preparation of reports; and the thing the AIC has emphasized so much, a real grounding in the responsibilities and the ethics which a man must assume to become a professional man instead of a Pro.

For the man going into secondary school teaching, this extra year might include the professional educational training necessary for securing a teaching certificate, plus special courses on how to explain scientific principles to teen-age mentalities; how to conduct imagination-stirring demonstrations, and how to identify and counsel boys and girls for whom chemistry might prove a successful life profession. Such a fifth-year degree might have a tremendous effect upon our educational system where so much of our science is now taught by professional educators rather than by scientists.

If a fifth year devoted to such specialized training is desirable, chemists will have to bring pressure on their universities to develop the courses involved; industry will have to be educated to recognize the value of this extra year of training, and to offer starting salaries high enough to make the extra year worthwhile.

Continual self-education is another

characteristic of the members of learned professions. If a chemist desires to achieve and maintain the benefits which arise from true professional status, he must be willing to devote a considerable amount of his time to his continued education. This is one of the costs for professional status as scientists. "Keeping up with the literature" is a burdensome task. Many chemists are unwilling to pay this price. But the things the chemist learned in college become more and more obsolete. If he does not continually expand his knowledge by self-education, his knowledge becomes largely what he is learning at his current employment. After a while, this leaves him little superiority over men who have not the initial university training, but who have been learning in similar industrial jobs.

An executive who sought to hire a chemist with experience in water treatment recently reported:

"After interviews with a half dozen young men who had received degrees in chemistry. . . I was shocked by the narrowness of their chemical knowledge. The general pattern to be observed was an ability to parrot details of the technical work they are doing daily, but a complete lack of knowledge of and ability to handle problems in fields that were reasonably closely related. . . In one case a chemist, who had been working for four years supervising water treatment for a group of cooling towers in an oil refinery, had absolutely no knowledge of water treatment for boilers, and, when the chemical changes which can take place in a boiler were explained to him, could offer no suggestions for chemical treatment methods."

These men were Chemical Pros, not Professional Men.

True professional status is also characterized by the willingness of professional men to work for the advancement of their own profession. They belong to professional and scientific societies, attend local and national meetings, and take part in committee activities. Another support extended to their professions is their willingness to assist the educational institutions in training new members for their profession. Top-ranking doctors take time from their busy practices to conduct courses in the medical schools. Much of the professional attitude of graduates from the medical and law schools is the result of the personal efforts of these professional men who give of their time to teach these principles. The chemical profession could improve its professional status, if chemists contributed more of their time to improve chemical training.

Another characteristic that distinguishes the professional man from the Pro is the matter of individual initiative, judgment, and responsibility. A high percentage of the specialized work done by chemists requires much the same kind of personal responsibility and decision as does that done by doctors or lawyers. However, this is not apparent to the general public, because chemists are mostly employed in industrial work and to the outsider appear as so many cogs in the industrial machine. Intelligent manage-

ment does all possible to utilize their scientists' ability for personal judgment and their willingness to assume personal responsibility. By this, management gets the maximum value from the dollars it pays for highly qualified technical men. However, this independence of action is hedged by certain necessary management practices. A chemist must recognize that he must fit himself into certain management procedures and definitions of responsibility. This involves a rather special kind of professional attitude. Perhaps we should give young chemists in our universities a better understanding of how one can be a true professional man and still adjust himself to standard industrial management practices.

Not all managements are highly intelligent, however. Many do not understand the extent to which industrial progress depends upon the special handling of people devoted to creative work. Frequently chemists are loaded with work which does not require, nor develop, the individual thinking and initiative which should be the characteristic of a real professional man. The lack of individual recognition or real opportunity for individual initiative is one of the great complaints of many engineers and scientists in industry.

The frequent failure of industry to use technical men in ways to develop their maximum ability is one reason why we find it hard to recruit scientists. Many men in industrial plants see college-trained scientists doing

tasks which can be performed by men with only plant training, so it is no surprise that they tell their sons there is no profit in getting a college education. There is no quick way to eliminate this roadblock that stands in the way of professional progress. Chemists in corporate management must use their influence in favor of those management practices that give technical men ways to use their training for their own and the country's benefit. Chemists advancing into the final level of management are frequently the worst offenders in restricting the initiative of chemists reporting to them. Such men must be taught to give to others the chance to show the personal initiative that they themselves desired.

By definition, the professional man must also use his special knowledge for instructing or serving others. This element gives the doctor, lawyer, or minister, much of the special prestige which he holds. The service that these men give to others is obvious and public, for they give it individually to other individuals in their business. We feel that the chemist deserves professional status on this basis, but unfortunately, our service is not rendered publicly to individuals. The contribution we make to our communities reaches the public in the form of products marketed by the companies for which we work. As a result, people do not think of the improvements in their living standards in terms of service rendered by chem-

ists, but rather in terms of service rendered by the chemical industry or "the science of chemistry." If this public attitude is to be changed, it must be by personal or organizational education of people to a truer understanding of the specialized service of the trained chemist.

The attitude of the public toward chemists is not only indifferent; but it may be actually unfavorable. There is a feeling that chemists are likely to be unrealistic, lacking in personal communication with their fellows, uninterested in social and humanitarian matters, and even responsible for much world turmoil as a result of their uncontrolled inventions. This is unfortunate, for many chemists yearn for the social prestige that goes with recognized professional status. To achieve this kind of recognition is going to involve a thorough re-education of the public, which must be taught to realize that the accomplishments of science are those of the entire membership of the entire chemical profession, each contributing in his own way. This type of public education will also improve the chemist's economic status because such an educational campaign should help to increase industrial management's recognition of the chemist's unique value.

There are many ways in which chemists and their societies can work on this educational program:

As individuals, they can train themselves as speakers for local gatherings; they can work through their societies

to see that news emphasizing the importance of chemists gets into the local newspapers; they can work with local radio and TV stations to get educational material that teaches people how chemists serve community interests.

Scientific organizations can help individual chemists do this more effectively, and they can also undertake programs on a broader scale to create public attitudes toward chemists. All

of this is personal and group public relations activity. It is my firm belief that chemists should do more conscious public relations work to improve their public standing.

The real rock bottom test of whether the chemist is a professional man or simply a Pro is the extent to which he recognizes his personal responsibility for the advancement of the professional and social standing of himself and other chemists.

He Taught Industry More About Chemists

E. Duer Reeves

Executive Vice President, Esso Research & Engineering Co., Linden, N. J.

(Excerpts from the introduction presented when Dr. C. F. Rassweiler received the Honor Scroll of the New York AIC Chapter.)

CLIFFORD F. RASSWEILER was born in Polo, Illinois. His father was a Methodist minister and the Rassweiler family moved around quite a bit through Illinois, Utah, and Colorado, as Mr. Rassweiler served various congregations. This was a most important period in Cliff's development because he learned three important things as he traveled around with his family.

First, he developed a real and abiding interest in people, which has been responsible for many of the things he accomplished later on. He also learned the importance of thinking things through, arriving at a conclusion, and then sticking by his convictions until the job was done. He also

learned that the way to get things done was to work for them, and he had a lot of practical experience here, because he worked from time to time as a truck gardener, fruit picker, delivery boy, factory laborer, street car conductor, bus driver, and janitor in order to get the education he had decided he must have.

When, as a boy, Cliff decided he wanted to be a chemist, it was by no means an idle whim but a career that he embarked on right from the start with conviction, determination, and hard work. His first step culminated in his receiving the A.B. degree from the University of Denver, after which he moved on to Illinois and the great Roger Adams. There he received the

M. S. degree in 1922, and the Doctorate in 1924. He has since added an honorary degree of D.Sc. from the University of Denver, in 1947.

Cliff now embarked on his career in industrial chemistry at the Experimental Station of the duPont Company in Wilmington, and in the three years from 1924 to 1927, amply demonstrated that he was a good chemist, even an outstanding one, quickly becoming a recognized expert in the paint and varnish field.

Two important events occurred in his life in 1927. The first was his marriage to Mary Hancock, who, by odd coincidence, is also a graduate of the University of Illinois. The second was that, because of the promise he had already demonstrated, he was given the job of helping to organize a new central chemical laboratory of the duPont Paint & Varnish Division, at Philadelphia, becoming its director in 1932.

When the Philadelphia Laboratory was being organized, industrial research was then a far cry from what it has become today. It was less than one-twentieth the size of today's effort. In 1957, the research effort of two or three individual companies combined will be equal to that done by all of industry in 1927, when the Philadelphia Laboratory was started.

Even more important than its small size, was the status of industrial research in those days. Then an industrial chemist had about as much

prestige as Don Quixote, and practical businessmen were for the most distrustful of what they considered to be dreamy scientists. They had no confidence in the ability of chemists to help them with their practical problems, and often wanted no part of such help. Against this background there was organized a new group of duPont scientists in a new laboratory. This group, possibly not realizing what they were attempting, decided to revitalize the paint industry, which was one of the oldest and most complacent industries, which, according to its own views, was doing quite well and saw nothing wrong at all with its rate of progress.

The Philadelphia Laboratory group accomplished a series of miracles in the face of well-entrenched opposition. Technically, they developed synthetic alkyd resins which almost overnight provided technical opportunities for the paint industry that had been undreamed of. More important, the group performed a super-sales job on a reluctant industry, and through persuasion, frankness, and good hard work, succeeded over the next ten years in revolutionizing the paint industry and revitalizing it in spite of itself.

This was an outstanding textbook example demonstrating how the application of technology, rather than just invention, could contribute to the development and growth of an industry.

Having done this, Cliff in 1941 accepted the same challenge from the construction industry, when he moved to Johns-Manville to take charge of their technical renaissance. Perhaps he did this because he did not believe the motto of his own industry, "Save the Surface and you save all," and felt that in addition to the good surface, he wanted something good underneath!

This last crusade is not over yet, but it is already successful. His efforts in the construction industry have demonstrated once again, in a way that almost looks too easy, what steady technical support can do to make an industry strong, aggressive, flexible and ready to grow on into the future.

These things that Cliff has accomplished have also been important for chemists generally, because what Cliff has done more than anything else is to demonstrate that the scientist is an important person in industry, and is somebody whom industry can respect and rely upon. This has really been his consuming interest, and he has worked tirelessly to secure for chemists and scientists recognition of their ability to contribute to industrial progress and to the development of their professional status. To give some idea of how much time and energy Cliff has devoted to this, I list some of the things he has done:

He is past chairman of the New York Section of the American Chemical Society; has served as Director-

at-large for this society and as vice chairman of the Policy Committee of its National Council, and he is now its president-elect.

He is past president and former director of the Industrial Research Institute, an organization actively devoted to improving the management and effectiveness of industrial research and the status of those engaged in it. He is past chairman of the Division of Engineering & Industrial Research of the National Research Council, and a Fellow of the American Association for the Advancement of Science; of the New York Academy of Science, and of the AIC. He is a member of the American Institute of Chemical Engineers, and of other societies.

It is significant that his accomplishments have been recognized not only by industry but by his fellow scientists, who know best what he has been able to accomplish. Recently he received the medal of the Industrial Research Institute for outstanding leadership in improving industrial research. He was awarded the Chemical Industry Medal (for 1957) of the American Section of the Society of Chemical Industry, of which he is past chairman.

Dr. Rassweiler is no ordinary man but has been a most effective pioneer in establishing the true place of science in industry and securing for industrial scientists real and lasting recognition of their professional importance and status.



Top, left to right: Drs. Hass, Berdick, Becker. Seated: Drs. Price, Rassweiler, Mr. Reeves.

Presentation of Honor Scroll

THE presentation of the Honor Scroll of the New York AIC Chapter was made to Dr. Clifford F. Rassweiler, F.A.I.C., vice chairman of the Board of the Johns-Manville Corporation, at a meeting held June 6, 1957, at the Hotel Commodore, New York, N. Y.

Dr. Murray Berdick, of Evans Research and Development Corporation, retiring chairman of the New York Chapter, presided. Dr. Rassweiler was introduced by E. Duer Reeves, executive vice president of Esso Research & Engineering Company. The presentation of the Scroll was made by Dr. Donald Price, consultant, New

York, N. Y., and chairman of the Award Committee.

Dr. Rassweiler accepted the award with an address on, "What Kind of Professional Status Do Chemists Want?" (See preceding pages.)

The citation on the Honor Scroll reads:

Clifford F. Rassweiler

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Common Sense Cuts Research Costs

S. C. Fulton

Executive Development, Esso Research & Engineering Co., Linden, N. J.
(Paper, here condensed, presented before the Thirty-fourth Annual AIC Meeting in Akron, Ohio.)

ESSO Research & Engineering Company is in the business of providing research and engineering services for the affiliates of the Standard Oil Company (N. J.). It has long been recognized that a research organization, just as a manufacturing company, must provide quality at a fair price to stay in business. This requires a continuing analysis of all operations to make sure that they are performed efficiently and economically. To help in this project, "Work Simplification" was incorporated into the broad program: about two years ago as one of the methods for improving productivity in research.

What do we mean by Work Simplification? It has many meanings, such as systems and procedures, time and motion study, use of gadgets, and adoption of short cuts. To Esso Research it is the concept taught by Professors Porter and Mullee at New York University, and by Allan Moganson at Lake Placid, N. Y. In a way it is a philosophy embracing a mechanism for finding a better way to obtain the required results. It has been uniquely defined as, "the organized use of common sense to find better and easier ways of doing the physical part of work." It is the participation-by-everyone concept.

Participation by everyone has added human relations to time and action studies and all of the other tools of Work Simplification—you do not tell people to improve; you do not even try to sell them; you obtain their co-operation.

Work simplification fits into the operation of a research and engineering company just as readily as in manufacturing and sales operations. The physical work associated with the translation of ideas into data and, finally, the design of an operating plant, is costly. It is here that Work Simplification can be applied with large savings. The only major difference is that in research there is no good way to measure in dollars the effect of improvements on the end products. Savings resulting from improvements in the cost of providing supporting services, however, can be estimated. On the basis that the research product is not influenced adversely, such savings can be credited to Work Simplification. This is sufficient to provide the incentive for spontaneous participation.

There are Many Benefits

Esso Research has saved more than one million dollars during the first year of the program. Most of these savings are recurring and were made

in the supporting services, which include pilot plant operation, clerical and stenographic, analytical, general services and mechanical work. Returns are not complete for the second year, but estimates indicate that the savings will be about double the amount saved in the first year. This will bring the annual savings to about \$3,000,000. Contributions from increased technical productivity, increased rapidly during the second year.

Many other benefits result from a Work Simplification program. In a survey conducted by Sears, Roebuck & Company ⁽¹⁾ many companies with Work Simplification programs reported an improvement in human relations and attitudes, less resistance to change, increased productivity, improved cooperation and team work, and better employee morale. More than 50 companies in the survey indicated the importance of the program to the growth of supervisory personnel. All of these benefits are being observed by Esso Research.

Organization Is Essential

In order to accomplish these returns, Esso Research established an Operations Analysis Committee to take the general responsibility for the program. This committee consists of several division directors, the vice president responsible for general administration, and the executive vice president.

Reporting to this committee is a Study Group made up of chemists, engineers, accountants and others. These people are assigned full time to this group for about one year after which they are replaced by others who serve for the same length of time. The man coordinating the Study Group activities is also coordinator for the whole program of the Operations Analysis Committee. At present the Study Group has six members, including a union representative, who are largely concerned with problems common to more than one division. The group is also available to assist divisions with their particular programs, and to serve as instructors in training courses. It is a staff group which assembles facts, conducts experiments when necessary, and provides data for analysis of operational problems.

Also reporting to the Operations Analysis Committee is a subcommittee for reallocation of personnel. This group consists of representatives from four of the larger divisions, employee relations, labor relations, and the coordinator of the Study Group. It is responsible for finding new jobs for personnel displaced by elimination of unproductive work.

Each division is responsible for setting up and conducting Work Simplification programs. All have contact representatives for coordination of the work with other divisions and the Study Group. Internal organizations differ with each division de-

¹ "Factory Management and Maintenance," November, 1954.

pending upon size and function.

Such an organization covers the basic requirements for a successful program. Top management is supporting the program by word and action. The existence of the reallocation committee and its demonstrated role in placing personnel in new jobs has helped encourage participation. Finally, the divisions are responsible for their own programs.

The Tools are Simple

Work Simplification is basically a program of solving problems of inefficiency and waste of time, energy, and materials. Ability to solve the problem is governed by the approach one uses and the tools he has to work with. Basically, Work Simplification tools are designed to outline in words, or graphically, how something is done in such a way that it can be rigorously analyzed and the effect of changes readily estimated. A great deal of emphasis is put on the five well-known rules for conducting an investigation:

(1) Ask the questions, what, why, where, when, who, and how, about every detail of the job or operation studied.

(2) Start with an open mind and maintain a questioning attitude throughout the investigation.

(3) Look for facts, causes, reasons, and not opinions or excuses.

(4) Watch for habit, tradition, and standard practice.

(5) Record all information that may lead to improvement.

It is important to know exactly what is done and be able to question why it is being done. What would happen if it were discontinued? Where is it done, and why is it done there? When is it done, and is it being done at the right time? Who does the work and should he be the one to do it? How is it being done and why is it done that way?

The answers to all of these questions make it possible to solve the four basic questions:

- (1) Can it be eliminated?
- (2) Can it be combined?
- (3) Can it be changed?
- (4) Can it be simplified?

To help make these analyses, several forms are available. Among those found most useful by Esso Research are Flow Process Charts, Multiple Activity Charts, Task Data Sheets, Activity Lists, Work Distribution Charts and Workplace Charts.

Time Budgets Promote Productivity

One important area for increasing research productivity is to have professional personnel do more of the kinds of things that require professional skills. In many research and engineering activities, a lot of professional skill is wasted on strictly routine work, and in such cases time budgets are helpful in minimizing such waste.

The first step in such a study is to enlist the help of all personnel involved to obtain a fairly accurate accounting of how time is spent. This can be measured in various ways. Each individual can keep time records covering the activities to be measured over a long enough period to be representative (*Work Distribution Chart*). The best and simplest way is to use the work count method based on random sampling.

As an illustration, the time distribution of a group of five chemists was found to be 30% on technical productive work; 22% on routine productive work; 15% on communications (excluding meetings); 15% on meetings, and 18% miscellaneous. The routine productive work is defined as work which can be done by a non-professional laboratory technician. Four of these technicians were assigned to this group at the time the work study was made.

It is obvious that technical productive work in this case can be increased by adding an additional technician to the group. Assuming 75% productivity for laboratory technicians and a proportionate increase in communications as a result of increased technical productivity, the routine productive work done by the professional people should be reduced to about 7% with technical productive work increasing from 30 to 40%.

Looking at the indicated gain another way the addition of one technician to the group is equivalent to

gaining almost 1 3/4 technical people on the original basis. The actual gain in technical productivity, however, should be confirmed by work distribution studies after the technician is added to the group. Add to this the savings in technical time by instituting improved communication methods and other benefits resulting from Work Simplification and some real savings are accomplished. Widespread studies of this nature should do much to alleviate the present shortage of technical personnel.

Training Encourages Participation

A well-organized training program is essential. While the tools are simple and readily acquired, training is necessary to develop the right kind of attitudes. Resistance to change has always been a serious barrier to the introduction of improved methods. Training by the roundtable method does a remarkable job in reducing this barrier. It is one of the main benefits of a formal training program.

Since the development of the right attitude is indicated to be so important, it is obvious that formal training should be given to many people in an organization. Esso Research uses three general training courses; a Work Simplification course for supervisors, consisting of ten two-hour sessions spread over ten weeks; a short course for nonsupervisory people, and a course for chemists and engineers.

The first two courses are based almost altogether on Work Simplifica-

tion principles generally accepted by most companies. We find we have a different problem with professional people. Problem solving which is the basis of Work Simplification is a technical man's business. Many already practice some of the concepts of Work Simplification in the normal course of their work. However, it is on an individual basis, and to be really effective it must be organized and coordinated along the right channels. How to develop the kind of attitude necessary to make real contributions is the big problem. For nonprofessional people, this attitude was in part developed with the acquisition of Work Simplification tools and roundtables on problem solving. The opportunity to develop such an attitude in professional people in this way is not nearly so great. For this reason the course for professional people is still being improved with their help, although the results to date have been very promising. The objective is to extend some kind of formal training to everyone in the organization.

There Is Always a Better Way

In the preceding sections a brief summary is given covering the progress in incorporating Work Simplification into a research and engineering organization. It is safe to predict that the program is going to be active and the returns big just as long as the program is maintained on an experimental basis. "There is always a better way" applies as well to the

practice of Work Simplification as to the things improved by it. Certainly a program like this requires a lot of time and effort, but we agree with J. Ogden Armour: "Whoever admits he is too busy to improve his methods has acknowledged himself to be at the end of his rope. And that is always the saddest predicament which anyone can get into."

New Officers: Of the Chemical Institute of Canada, 18 Rideau St., Ottawa 2, Canada, are: President, Dr. O. J. Walker, F.C.I.C.; vice president, C. E. Carson, M.C.I.C.; chairman of the Board, Dr. L. Piche, F.C.I.C.; treasurer, R. J. Allen, and General Manager and Secretary, Dr. Garnet T. Page, F.C.I.C.

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Communications

Raymond E. Kirk Memorial Fund

To the Friends of Dr. Kirk:

A number of friends of the late Raymond E. Kirk wish to do something to perpetuate his memory, and we feel that this can best be done by the establishment of a Memorial Fund which will be used for scholarships at the Polytechnic Institute of Brooklyn. Since you, too, were a friend of Dr. Kirk, we are inviting you to join us in this effort by making a contribution to the Fund.

You will recall that Dr. Kirk served The Polytechnic Institute from September, 1931 until his death in February, 1957. While it is planned that most of the contributed funds will be used for Undergraduate Scholarships it is possible that you may prefer that your contribution be earmarked for a Memorial Lecture Hall. Checks should be made out to The Polytechnic Institute and marked for "Kirk Memorial Scholarship Fund," or for "Kirk Memorial Lecture Hall." Thus, all contributions are fully tax deductible. All expenses have been separately contributed.

Those of us who had the privilege of association with Dr. Kirk and were aware of his great contributions to education, and therefore to science and to industry, will wish to commemorate his generosity, his unselfishness, his friendliness and devotion to his students and to our profession.

We hope that you will join us in this tribute to the memory of Dr. Kirk.

—Executive Committee of the Raymond E. Kirk Memorial Fund,
99 Livingston St., Brooklyn 1,
N. Y.

Karl M. Herstein, F.A.I.C.,
Chairman

Donald F. Othmer, F.A.I.C.
Carl Setterstrom, F.A.I.C.

Patent Assignments

To the Editor:

Regarding the item in "Potomac Postscripts," *Chemical & Engineering News*, July 1, 1957, p. 32, that "about 65% of all patents are assigned to corporations", it may be of interest to note that as regards chemical patents the assignment to corporations is about 70%. This is so because mechanical inventions are often simple constructions, but chemical inventions are impossible without use of an expensive laboratory and special knowledge. Outside of professors there are few other non-employee chemical inventors.

* From 1790 to after the Civil War there were few if any employee-inventors. Inventions as a profession is a product of the modern large corporation; the paid-in-advance employee-inventor has displaced the rugged individualistic inventor.

Patents are today granted to corporation employee-inventors who at no time own the invention. Actually

the true inventors are the corporations. Corporations by law are living beings with perpetual life and in England and other countries the corporation can patent its inventions in the corporation name without mention of any human being as an inventor.

It is because of group attack of chemical problems that the number of human inventors is too large to place upon a patent. As a result the director of research takes out the patent in his name and assigns it formally to the corporation. Actually such assignments are unnecessary as the corporation owns the invention with or without a patent. It follows that busy research directors become inventors of innumerable patents when in point of fact they have contributed little brainpower to the conception of the claimed matter.

Accordingly it is here suggested that corporation inventions be patented in the corporation name without use of a meaningless assignment.

—Dr. Frank Makara, F.A.I.C.
New York, N.Y.

Professional Chemists and Unions

To the Editor:

An article appearing in the August 1957 issue of *Chemical Processing* is entitled, "Engineers Must be Unionized." I have carefully reviewed this article and have given its subject quite some consideration. The issue of whether chemists along with other

scientists should be unionized is a matter which has already occupied many pages of your journal as well as the publications of the American Chemical Society and the American Institute of Chemical Engineers, and debated pro and con. We already know that a number of chemists have already joined the unions.

From this it would appear to be obvious that this may force a separation into two classes or even factions—the difference between a chemist practicing in the professional capacity on the one hand, and those chemists who might better operate under the name of "chemical aide" or "laboratorian." There is further some question as to the practicality of forcing partitioning of the practice of chemical science into these two divisions and making it known to the public as such.

Possibly, our members may want to express their reactions on this important issue concerning the professional status of the chemist.

—H. A. Levey, F.A.I.C.
New Orleans, La.

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Let's Stop Talking To Ourselves!

To the Editor:

During the past few years, I have sought evidence in publications of the society which would indicate activities by the society directed toward obtaining acceptance of chemistry as a profession without much success. Apropos to this concern, I read with considerable interest the editorial by John H. Nair, F.A.I.C., titled "Suggestions for the Future." The remarks in this editorial indicate to me that others share with me the concern about the lack of progress toward what we consider the primary objective of the society. The fact that "frequently these comments come from members who do not participate in any activity of the Institute" is no reason for sweeping them under a rug. Furthermore, if these individuals stated these "complaints of lack of activity or accomplishment by AIC", then they are participating and demonstrating an interest in the society. . .

The policy which has annoyed me the most is that of society sponsored speakers continuously telling the members how to behave professionally. (I have assumed that only professional chemists are entitled to membership in the AIC.) This attitude characterized the 34th Annual Meeting, judging from the reports appearing in *THE CHEMIST*. Whenever I read *THE CHEMIST*, I

feel like a little boy being lectured on proper social behavior. These efforts could better be directed towards the education of the lay public and politicians in the relationship of the scientist to society. Let's stop talking to ourselves.

—Dr. Sol Skolnik, F.A.I.C.
Indian Head, Md.

Popular Talk

To the Editor:

May we have permission to print the talk given by Dr. Clifford F. Rassweiler, before your society recently, and which also appeared in *Chemical & Engineering News*.

—Editor

*Society of Plastics
Engineers Journal.*

Note: This talk appears on page 375 of this issue of THE CHEMIST.

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About AIC Members

Dr. Robert Hill Kean, F.A.I.C., received the 1957 Distinguished Service Award of the Virginia Section of the American Chemical Society, June 7th, at the Officers Club, Richmond, in "recognition of his outstanding contribution to the professional standing of chemists."

George E. Merkle, F.A.I.C., is now president of Fiske Brothers Refining Co., 129 Lockwood St., Newark, N. J.

P. J. Wood, F.A.I.C., technical director, Royce Chemical Co., Carlton Hill, N. J., will receive the Olney Medal of the American Association of Textile Chemists and Colorists at the AATCC Convention, Nov. 14-16, in Boston, Mass.

Dr. John H. Yoe, F.A.I.C., chairman of the Chemistry Department of the University of Virginia, received the Fisher Award in Analytical Chemistry at the American Chemical Society meeting in Miami.

ABOUT AIC MEMBERS

Dr. William J. Sparks, Hon. AIC, has been appointed to the newly created position of scientific advisor to Esso Research and Engineering Co., Linden, N. J.

Dr. W. E. Hanford, who will receive honorary AIC membership at a date to be announced later, has been appointed assistant to the president for research of Olin Mathieson Chemical Corp., New York 22, N. Y.

Edward L. Gordy, F.A.I.C., assistant to the vice president in charge of research and development, Standard Oil Co., of Indiana, is serving on the advisory board of the *Advances in Chemistry Series*, published by the American Chemical Society.

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John Kotrady, F.A.I.C., is now assistant purchasing supervisor, Purchasing Department, The Texas Co., 135 E. 42nd St. New York 17, N. Y.

Dr. Gordon M. Kline, F.A.I.C., National Bureau of Standards, Washington, D. C., has been elected a council member-at-large of the Gordon Research Conferences.

Dr. Walter J. Murphy, Hon. AIC, editorial director of the American Chemical Society's applied journals, recently urged scientists to take a more active part in public affairs, but cautioned them to recognize the limits of their knowledge in expressing views on social, economic, and political matters. He recommended that they confine public statements to those matters in which training, background and general experience qualify them as experts and to make clear they are expressing personal views.

Dr. Davis R. Dewey, II, F.A.I.C., president of Baird-Atomic, Inc., Cambridge 38, Mass., announces that J. M. Medzorian has been named controller.

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Dr. Russell M. Pickens, F.A.I.C., retired on July first as vice President of Rayonier, Inc., New York 17, N. Y., a position he has held since 1949. He will continue to serve the company as consultant.

Dr. John R. Bowman, F.A.I.C., research director of Mellon Institute for Industrial Research, Pittsburgh, Pa., has been elected to the Board of Trustees of the Gordon Research Conferences.

Milton Glaser, F.A.I.C., vice president, Midland Industrial Finishes Co., Waukegan, Ill., received an Outstanding Service Award from the Chicago Paint & Varnish Production Club, at its Past Presidents' Night, held June third in Chicago.

Dr. Albert C. Zettlemoyer, F.A.I.C., research director of the National Printing Ink Institute and professor of chemistry at Lehigh University, recently returned from a four-week trip to technical conferences in Europe under the auspices of the U. S. Navy.

Dr. Thomas H. Vaughn, F.A.I.C., executive vice president in charge of corporate development of Pabst Brewing Co., has been elected to the board of directors of American Alcolac Corporation, Baltimore, Md.

Dr. A. H. Warth, F.A.I.C., AIC council representative from the Baltimore AIC Chapter, recently completed the second edition of *The Chemistry and Technology of Waxes* (Reinhold Publishing), contributed to the *Encyclopedia of Chemistry*, (Reinhold) and to a technical book published by the University of Bristol, England, and authored the section on waxes for *Engineering Materials Handbook* (McGraw-Hill.)

New Officers: For the American Section of the Society of Chemical Industry: Dr. William H. Bowman, F.A.I.C., assistant general manager, Organic Chemicals Div., American Cyanamid Co., New York, N. Y., who is honorary chairman. The honorary vice chairman is Dr. Fred J. Emmerich, Hon. AIC, chairman of the Board, Allied Chemical and Dye Corp., New York, N. Y.; honorary treasurer, John S. Parkinson of Johns-Manville Research Center, Manville, N. J.; honorary controller, Dr. Robert Heggie, F.A.I.C., director of research, American Chicle Co., Long Island City, N. Y., and honorary secretary, R. W. Cairns of Hercules Powder Co., Wilmington, Delaware.

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Leo A. Rauch, F.A.I.C., executive vice president of Schaar & Company, Chicago 34, Ill., recently received an award from the National Conference of Christians and Jews for his daily devotion to the ideals of brotherhood.

John F. Collins, M.A.I.C., has been promoted to personnel administrator at Armour Research Foundation, Illinois Institute of Technology, Chicago 16, Ill.

M. K. Thornton, F.A.I.C., retired March first from the Texas Agricultural Extension Service, College Station, Texas. He is now technical director of the Texas Limestone Association.

Dr. Henry B. Hass, F.A.I.C., announces that eleven companies are licensed to manufacture sugar esters useful in the formulation of detergents, emulsifiers and pesticides. Dr. Hass is president of Sugar Research Foundation, New York 5, N. Y., which holds patent rights on the manufacturing process.

Seymour Goldfarb, M.A.I.C., is now sales director of the Cunilate Wood Seal Division of Scientific Oil Compounding Co., Chicago, Ill.

Dr. J. C. Warner, Hon. AIC, president of Carnegie Institute of Technology, announces that the Petroleum Research Laboratory, the Manufacturing Chemists Association Research Project, and the Thermochemical Laboratory are now incorporated as the Chemical and Petroleum Research Laboratory.

Dr. Irving Skeist, F.A.I.C., announces that his laboratory and that of Dr. Eugene W. K. Schwarz have been combined into: Skeist & Schwartz Laboratories, Inc., at 89 Lincoln Park, Newark 2, N. J. They offer services to the plastics and textile industries.

Edgar W. Fasig, F.A.I.C., vice president, manufacturing and technical development, The Lowe Brothers Co., Dayton, Ohio, has received an Award of Merit from the American Society for Testing Materials, Philadelphia 3, Pa., in recognition of constructive contributions to ASTM research and standards work.

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Dr. John E. McKeen, Hon. AIC, president of Charles Pfizer & Co., Inc., Brooklyn 6, N. Y., presented a check from the company for \$20,000 to Masuru Takechi, chairman of the board of Pfizer Taito Co., Ltd., on June 12th, for a fellowship program to help Japanese medical students pursue a year of graduate study. Dr. McKeen was on a tour of Pfizer installations in the Far East.

AIC Fellows: On the advisory committee for the 26th Chemical Exposition include: Dr. E. R. Weidlein, Hon. AIC, chairman; Dr. Roger Adams, Hon. AIC; Dr. J. V. N. Dorr; Dr. Sidney D. Kirkpatrick, Hon. AIC; Walter E. Lobo, Dr. Walter J. Murphy, Hon. AIC; Dr. W. T. Read, Hon. AIC; and Dr. N. A. Shepard. The Exposition will be held at the Coliseum, New York, N. Y., December 2-6, 1957.

Bernard R. Krashin, M.A.I.C., president, Colton Chemical Co., Cleveland 14, Ohio, (a division of Air Reduction Co., Inc.) announces that a new type of emulsion, Flexbond 100, is now available.

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E. McKendree Hayden, F.A.I.C., has been appointed special assistant to William H. Baldwin, president of The Stanley Chemical Co., East Berlin, Conn. Mr. Hayden is also vice president and director.

Dr. Edward Segal, F.A.I.C., is the new director of research for Montrose Chemical Corporation of California, Torrance, California.

Nominations: Sought by the Glycerine Producers' Association for Glycerine Research Awards for outstanding research involving glycerine. First award is an honor plaque and \$1,000. Entry blanks will be supplied by the Awards Committee of the Association, 295 Madison Avenue, New York 17, N. Y. November 1, 1957 is the deadline for nominations.

Announced: By Roger Williams Technical & Economic Services, Princeton, N. J., that its subsidiary of the same name has opened an office at 906 Edificio de Arquitectos, Humboldt 7 P. Vedado, Habana, Cuba.

ABOUT AIC MEMBERS

Ralph Mayer, F.A.I.C., has recently revised *The Artist's Handbook of Materials and Techniques* (The Viking Press, Inc.) He first published it in 1940.

Dr. Albert Y. Garner, A.A.I.C., is now research chemist with the Plastics Division, Monsanto Chemical Co., Springfield, Mass.

Dr. Rudolph Seiden, F.A.I.C., has been elected a member of the Board of Directors of Corn King Co., Cedar Rapids, Iowa, a subsidiary of Cutter Laboratories. He is also vice president of Haver-Glover Laboratories, Kansas City, Mo. His new *Handbook of Feedstuffs* (Springer Publishing Co.) has just been published.

Dr. Franklin T. Peters, F.A.I.C., is now assistant manager of the Fine Chemicals Division, Shulton, Inc., Clifton, N. J.

Dr. Robert N. DuPuis, F.A.I.C., has been elected a director of Philip Morris, Inc., Richmond, Virginia.

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AIC members who are seeking positions may place notices in this column without charge.

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Air Pollution Control Engineers and Chemists. Salary range from \$507 to \$616, San Bernardino County. Apply San Bernardino County Dept. of Civil Service, 236 Third Street, San Bernardino, California.

U.S. Economy: Since the turn of the century has developed from a primitive capitalism to a self-regulating economic system, John M. Olin, chairman of the board of Olin Mathieson Chemical Corp., stated recently. "It has developed, matured and improved with such speed that public understanding of it lags farther and farther behind." He urged management, labor, and education to combine forces and develop an educational campaign to promote better understanding of our basic economic principles. "Ownership by the many has replaced ownership by the few . . . With such things as public and private pensions, hospitalization plans, unemployment compensation, and social security, we are buttressing ourselves against the uncertainties of the future . . . Yet the fundamental principles of free competition, a free market, and the profit motive as an incentive for all are among the least understood elements of our national life."

He cited a survey in which 1200 high school students were asked. "Are you in favor of government ownership of industry?" That 53 per cent of these students voted Yes "should be a matter of the gravest concern for all people."

Dr. John A. King, F.A.I.C., is director of chemical research of the Research Division, Armour & Company, Chicago 9, Illinois.



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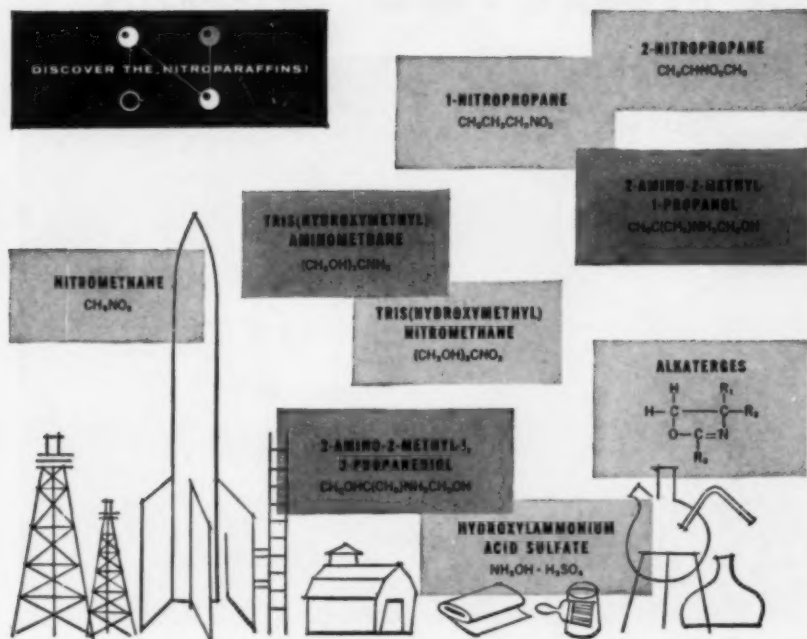
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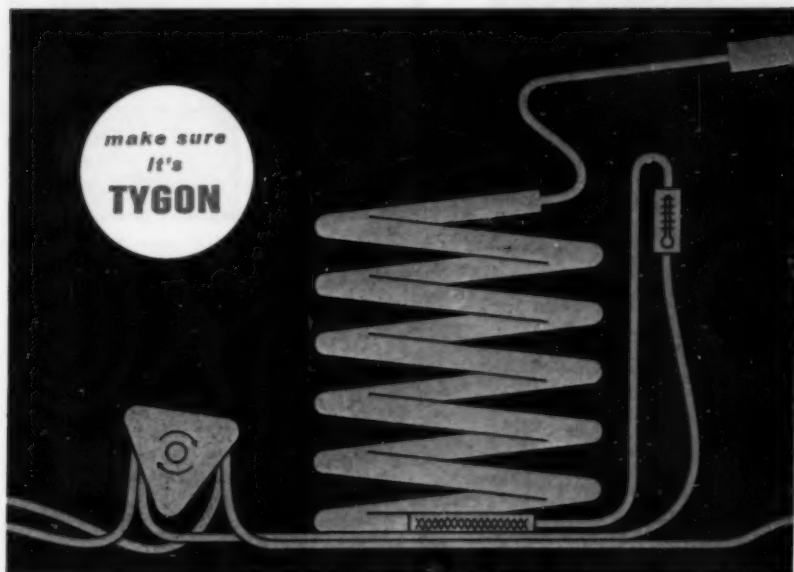
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